



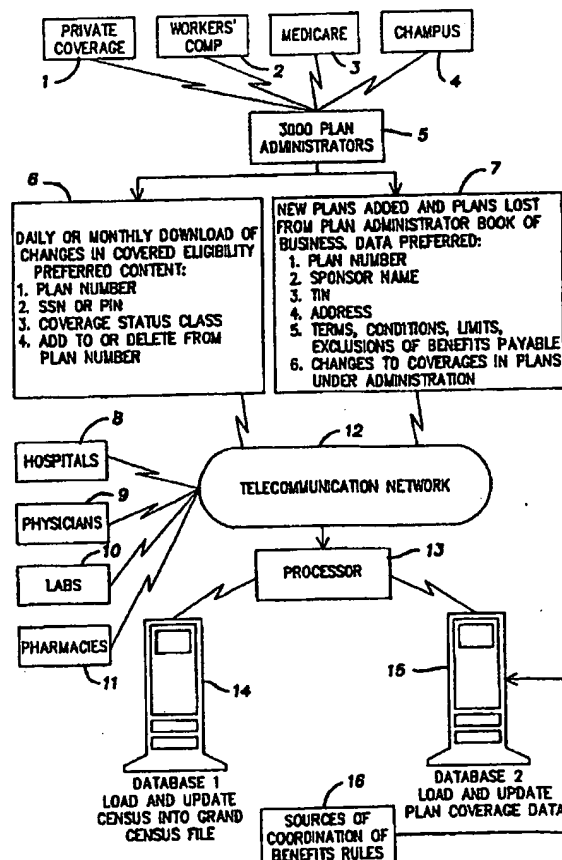
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G06F		(11) International Publication Number: WO 95/03569
A2		(43) International Publication Date: 2 February 1995 (02.02.95)
(21) International Application Number: PCT/US94/08012 (22) International Filing Date: 18 July 1994 (18.07.94) (30) Priority Data: 08/093,092 16 July 1993 (16.07.93) US (71)(72) Applicant and Inventor: LAWLOR, Patrick, M. [US/US]; 3561 Lynnfield Road, Shaker Heights, OH 44122 (US). (74) Agent: DICKINSON, R., H., Jr.; Pearne, Gordon, McCoy & Granger, 1200 Leader Building, Cleveland, OH 44114 (US).		(81) Designated States: BR, BY, CZ, HU, JP, KR, PL, RU, SK, UA, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>Without international search report and to be republished upon receipt of that report.</i>

(54) Title: SYSTEM FOR MEDICAL BENEFITS CLEARINGHOUSE

(57) Abstract

A method for operating a computer apparatus for applying the rules for coordination of benefits to claims under medical insurance. The computer has a first database containing a grand census file identifying all individuals by social security number of personal identification number together with the plans under which they are covered. A second database contains information as to the nature of the plan coverage together with the rules for coordination of benefits. When a claim is processed, it is first checked against the individual by identification number in the first database to determine all plans under which coverage could be obtained. Thereafter, the claim is processed for coverage under the information in the second database together with the rules for coordination of benefits to determine primary and secondary coverage. Optionally, the claims may then be processed for payment according to such primary and secondary coverage. All such determinations are then stored in a historical database for future reference.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

-1-

1 SYSTEM FOR MEDICAL BENEFITS CLEARINGHOUSE2 BACKGROUND AND SUMMARY OF THE INVENTION

3 The present invention pertains to a method for data
4 processing, and more particularly to the evaluation of primary
5 and secondary liability among multiple sources and types of
6 medical insurance and benefit plans (a clearinghouse). The
7 method enables automated submission of claims to the source
8 of insurance or benefit coverage which is legally the primary
9 obligor of the medical claim at issue for payment for medical
10 services rendered. This process may involve computer
11 comparison and processing of diverse schedules of benefits and
12 terms of coverage.

13 The method includes loading into a central database a
14 list of coverage plans preferably by plan number, a list of
15 sponsors of those plans preferably by employer or tax
16 identification number, including the nature and extent of
17 benefits payable under the plans, and a list of all the
18 covered persons under those plans, preferably by social
19 security number (SSN) or a personal identification number
20 (PIN), hereinafter referred to as identification codes, and
21 by the class of coverage which each such person has under each
22 plan. Various other sources and patterns of data are possible
23 under this method.

24 The method then receives inquiries regarding a claim
25 wherein a given social security number or other identifying
26 code represents the person for whom care was or is about to
27 be rendered. The present invention automatically identifies
28 all sources of insurance coverage for the person identified
29 by that identification code, then applies federal, state, and
30 private rules of coordination among benefit plans to identify
31 the primary and secondary coverages.

32 Medical billing offices may be supplied with the name, address
33 and plan number of the primary coverage payor or of a
34 hierarchy of primary, secondary, tertiary, etc., payors.

-2-

1 Insurance claims processing offices may then be provided with
2 notice by the clearinghouse as to whether they are the primary
3 or secondary payor on a given claim.

4 Depending on hardware used, an embodiment of the present
5 invention would allow capture of all the elements of a
6 complete medical bill, including the patient signature.
7 Electronic downloading of claims and proof of care for a given
8 calendar day may be processed through the clearinghouse to the
9 primary and secondary payors at close of business or other
10 predetermined time.

11 This invention is significantly different from the
12 invention described in U.S. Patent Number 4,491,725. That
13 patent issued for an encoded identification card which allowed
14 medical providers to bill their service by modem. The central
15 process of the '725 patent is the translation of medical
16 billing codes into coverage codes under the patient's
17 insurance plan, and the electronic transfer of funds from the
18 insurance plan to the medical care provider. Patent 4,491,725
19 did not contemplate the possibility of multiple sources of
20 coverage for any given individual, a phenomenon which exists
21 in many households today. It makes no assertion of an ability
22 to coordinate benefits among plans that cover the same person.

23 Most Americans are covered today under health insurance
24 of one kind or another, including coverage from over 900
25 insurance companies, and approximately 2,500 claims
26 administrators. These parties process claims for public and
27 private employee benefit plans, and public welfare programs
28 including Worker's Compensation plans, Medicare, Medicaid,
29 Titles IV, V, and VI, plans for coverage for retired public
30 and private sector employees, plans for the coverage of
31 civilian relatives of military employees (eg: CHAMPUS),
32 supplementary coverage plans, homeowners, casualty insurance,
33 employers, unions, fraternal, social and religious
34 organizations, the Indian Health Service, the Veteran Affairs
35 Health Programs. Further, the patient himself is often liable
36 for all or part of many medical bills, and that liability may

-3-

1 be subject to amounts deductible from his general coverage
2 under any of the foregoing insurance programs.

3 The typical procedure for billing medical services
4 involves an electronic billing process for 80% of Medicare
5 claims, and payment by invoice by virtually all other plans
6 (the vast majority of paid claims). Ordinarily, a medical
7 bill is prepared on paper and mailed to the insurance carrier,
8 claims administrator, or other party indicated by the patient
9 to be the source of his medical insurance coverage.

10 Frequently, patients err in their statements of coverage,
11 or are unaware of multiple sources of coverage available to
12 them, or have no clear understanding of which of the coverages
13 available to them is, at law, the primary source to pay a
14 given medical bill. For various reasons a subrogation
15 interest to another source of coverage exists for the carrier
16 or claims administrator initially billed for approximately 15-
17 25% of all claims filed in the United States. The result of
18 not naming the correct primary insurance coverage provider is
19 a substantial increase in operating costs for medical care
20 providers and insurance carriers and administrators, and
21 substantial delays in payment of claims, resulting in
22 increased capital costs for medical care generally.

23 In addition, many persons are covered by more than one
24 plan of coverage and fail to disclose this information to
25 either their medical care provider or their insurance carrier
26 or claims administrator.

27 Claims payors typically have no general source of
28 coverage information for their covered persons other than
29 information volunteered by the covered person, and cannot,
30 prior to the present invention, systematically capture
31 information that would allow full subrogation of claims to
32 which they are secondary payors. The results of this lack of
33 information are a large displacement of claims costs to payors
34 of coverage who have a only a subordinate liability to pay for
35 care, and often more than one payor paying an entire claim
36 resulting in the payee being unjustly enriched.

-4-

1 Many Americans travel across state lines to work, and
2 have coverage in two or more states, subject to differing
3 state insurance regulations, including coordination of
4 benefits (COB) and subrogation regulations. In addition, many
5 persons have coverage that is administered in a remote, rather
6 than in their own or a contiguous state, or may have coverage
7 under an ERISA-regulated plan that may have adopted non-
8 standard rules for the coordination of benefits. ERISA-based
9 plans are not regulated on the rules of coordination in most
10 states, and thus represent a high-volume challenge to maintain
11 up-to-date COB rules in any coordination system.

12 Many different classes of coverage exist, for example,
13 regular health insurance, and supplemental insurance which
14 covers the otherwise uninsured risk of the insured person.
15 Current rules of coordination allow for various levels of
16 exactitude in assessing the sources of contribution on any
17 given claim, and the instant invention has the capacity to
18 respond with several different levels of precision with
19 respect to the coordination issue in any given fact situation.
20 Optimal coordination in the context of differing classes of
21 insurance requires coordination on the basis of the medical
22 service rendered. For example, where a standard commercial
23 health insurance plan may omit coverage for vision services,
24 a supplemental vision policy may cover these bills, and to be
25 complete, the COB test would preferably include a
26 specification of the service rendered as compared to the
27 services covered under each plan covering a given individual.
28 Thus, where no detail is available, the instant process will
29 identify all sources of insurance. Where no coordination
30 regulations among multiple possible obligors, a significant
31 non-obvious utility of the instant invention is the service
32 of notice to the multiple primary obligors that the others
33 exist, opening a context for voluntary coordination or
34 segregation, or contribution to the patient of the
35 clearinghouse. Where sufficient detail as to a claim exists,
36 a fully detailed and dispositive assessment of the hierarchy

-5-

1 of obligors and the amounts of their respective and collective
2 obligations can be made.

3 Thus, the development of a process that can economically
4 provide a comprehensive test of the priority of obligation has
5 been obstructed in the past by a number of forces. These
6 include the high rate of change in enrollment in any of the
7 aforementioned insurance programs (estimated at 5-7 Million
8 enrollment changes per month) and the sheer complexity of the
9 possible sources any individual may have for coverage or
10 indemnity.

11 There is another layer of complexity that has forestalled
12 development of a clearinghouse of this class, which is the
13 internal management of a given employer, pension, or public
14 benefit plan, and/or a change of vendors which changes the
15 terms of eligibility, benefit schedules, or operating rules,
16 which in turn may affect the outcome of coordination results
17 as between such a plan and other sources of coverage for the
18 individual. Thus, a public retirement health benefit may at
19 some point in time eliminate vision coverage, resulting in a
20 finding by the clearinghouse that the patient's supplementary
21 coverage is, in fact primary, when in the prior month the
22 retirement plan would have been primary. The optimal
23 execution of automated coordination therefore requires up-to-
24 date tracking of the content of benefit plans, as well as
25 accurate dating of medical services billed.

26 The interactive regular (preferably daily) online update
27 of this data is important and represents a large-volume
28 regular transaction and a large-volume of record keeping.
29 However, this process allows the instant invention to permit
30 the same degree of freedom of contract, and the same degree
31 of innovation in the large and complex market for health
32 insurance.

33 Thus, the patterning of tests within a software program,
34 the purpose of which is to provide a comprehensive test of
35 coordination of benefits, is a project of enormous complexity,
36 with thousands of possible outcomes for an individual claim.

-6-

1 Use of the invention here described would also in no way
2 restrict evolution and development in the insurance industry,
3 in the management of individual plans, in the development of
4 new state or federal formulae for the coordination of benefit
5 plans or the financial contribution of various organizations
6 on given medical bills, and would not require, but could adapt
7 to, modifications in federal regulation on this subject
8 matter, as the model here at issue is adaptable to changing
9 coordination rules and rules affecting coordination.

10 Until the present time the common supposition has been
11 that an insurmountable barrier to automated COB existed in the
12 variety of hardware and software choices used by medical
13 providers and insurance administrators in their work.
14 Heretofore, the presumption has been that a national or
15 international standard for electronic communication of benefit
16 documents was necessary to attempt automated COB or electronic
17 billing. This presumption is incorrect. Contemporary
18 technology allows for the translation of differing operating
19 systems and software programs into other such formats without
20 significant modification of either system or program, and
21 makes the otherwise prohibitive cost of retooling the billing
22 and claims systems in a national economy unnecessary.

23 One example of the means by which this complex pattern
24 of coverages and varying coordination rules can lead to
25 willful abuse of the providers of coverage would be the case
26 of a Medicare-covered person who also has employer-provided
27 private insurance, insurance as a dependent on a spouse's out-
28 of-state employer-provided private insurance, supplemental
29 insurance, and workers compensation coverage. Such a person,
30 suffering an accident injury, may, under the current method,
31 file claims against all five plans and receive indemnification
32 from all of them. Various authorities have estimated the 1991
33 cost of fraud, error, and manhours consumed in efforts to
34 correctly coordinate benefits as being between \$63,000,000,000
35 and \$90,000,000,000.

-7-

1 The invention here described would, under the current
2 rules of coordination, excuse Medicare and the spouse's
3 employer-provided insurance as secondary coverages, and would
4 introduce the patient's primary (employment) coverage to the
5 supplemental carrier an/or the workers' compensation provider
6 for resolution of contribution formulae or the system would
7 identify the correct primary obligor by application of rules
8 of coordination of benefits. The instant invention may use
9 diagnostic coding to gain an indication of the most probable
10 obligor as between the employment and workers' compensation
11 insurance. All of these tests may be implemented at the time
12 medical service was rendered and/or at the time any or all of
13 the above-listed sources of coverage processed claims from the
14 injury at issue. No significant time would elapse before this
15 coordination process was complete, and little or no human
16 effort would be expended to capture and delete these multiple
17 payments.

18 The solution of these related problems requires that
19 participating sources of insurance coverage or medical
20 benefits deposit data or make data accessible to a
21 clearinghouse, preferably including:

22 a) the social security number and/or other identifying
23 code of each person having a right to benefits under any plan
24 operated by the insurance carriers or claims administrator;

25 b) the effective date of coverage and termination under
26 the coverage at issue;

27 c) the plan number(s) under which such person is
28 covered;

29 d) the nature of the coverage, its terms and
30 limitations, the benefits payable, as a subfile of each such
31 plan number;

32 e) the class of coverage under which each individual is
33 covered (e.g.: employee, spouse, child, retiree. . .); and

34 f) mailing, tax identification, and other control data
35 for the plan of coverage and its center(s) for claims
36 administration. Because of turnover in persons covered under

-8-

1 any given plan or method of coverage, this data should be
2 updated frequently, for example, daily.

3 The present invention would allow the claims processor
4 to make an automated or telephonic inquiry on the social
5 security number or other identifying inquiry on the social
6 security number or other identifying code of the person at
7 issue, and to determine from a computerized database of the
8 clearinghouse that the applicant has coverage as an employee
9 from another carrier or claims administrator. The carrier or
10 administrator making the inquiry may be advised,
11 electronically or telephonically, that it was secondary to the
12 employer plan, and ought not to pay on the claim at issue
13 without evidence of the primary payor's processing and
14 payment.

15 The present invention thus eliminates to a great extent
16 the need for human effort in coordination of benefits, beyond
17 the establishment of a data link between the claims processing
18 office computer systems and those of the clearinghouse. The
19 present invention would establish to a high degree of
20 reliability, primary and secondary liability, thus
21 transferring claims to appropriate payors, and capturing both
22 erroneous and intentional double billings.

23 By extending access to the clearinghouse to medical care
24 providers, the care provider may identify primary and
25 secondary payors by data link or telephonically. The result
26 of this access and report would be the elimination of errors
27 in routing accounts receivable, and the elimination of
28 manhours in efforts to identify correct sources of primary
29 coverage. Providers may include physicians, hospitals,
30 pharmacies, laboratories, or other person or entities licensed
31 or otherwise authorized under applicable state or territory
32 laws to furnish healthcare items or services.

33 In a medical care venue, the present invention can
34 establish sources of insurance coverage before admission or
35 delivery of care services, and provides a means to capture:

36 a) diagnosis code;

-9-

- 1 b) date of service rendered
2 c) care code;
3 d) patient signature;
4 e) payee employer identification number and mailing
5 information; and
6 f) various control codes.

7 The unique method of the present invention can also
8 electronically or on hard copy deliver accounts payable to the
9 correct primary payor, eliminating a significant cost of doing
10 business for medical care providers and insurers alike in the
11 processing, mailing, and maintenance of paper records.

12 A significant non-obvious utility of a process such as
13 the instant invention is the possibility of an large system
14 of electronic commerce with one step and only one step, and
15 little or no human effort to resolve the issue of primacy in
16 obligation to pay for claims. The utility of this invention
17 is in part in that it reduces the cost, time, and error rate
18 of electronic billing systems by a very large factor insofar
19 as so reduces the processing required to arrive at a correct
20 hierarchy of payors.

21 Technology exists to capture patient signatures. For
22 example, incorporating an electronic clipboard manufactured
23 by Tappon Moore, Ltd. (or equivalent), would constitute a
24 significant improvement in the security system of medical
25 payment for a high percentage of care services rendered. At
26 present, the majority of medical service bills are generated
27 and paid without the patient's signature to certify that the
28 care has, in fact, been rendered. The absence of proof that
29 medical services were actually rendered has collateral impact
30 in the abuse and manipulation of various benefit plans, as
31 well as a diminution in the audit and cost containment efforts
32 within the health care finance industry.

33 BRIEF DESCRIPTION OF THE DRAWINGS

-10-

1 FIG. 1 is an overall view of the method showing the
2 various inputs through the telecommunication network to the
3 processor;

4 FIGS. 2A, 2B and 2C are a flow chart showing the
5 processing of claims through the method; and

6 FIG. 3 is a flow chart showing a method of processing
7 claims for payment after the coordination of benefits has been
8 applied to determine the primary and secondary sources of
9 payment.

10 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

11 Referring to FIG. 1 in greater detail, the method shows
12 that a number of insurance programs such as private coverage
13 1, Workers Compensation 2, Medicare 3 and Champus 4 by way of
14 example, but not limitation, routinely deposit enrollment and
15 plan change information to the plan administrators, although
16 only four plan sponsors are shown, it is believed that in the
17 current U.S. market there is approximately 2 million separate
18 plan sponsors offering different plans and coverage to the
19 entire U.S. population through 2,500 plan administrators in
20 1994.

21 The plan administrators shown at 5 collect all the
22 information and assemble their records and updates so that
23 each maintains a current set of information as provided by the
24 separate plan sponsors.

25 According to the present invention, there is a further
26 download from the plan administrators 5 through a
27 telecommunication network 12 to a central processor 13. This
28 download takes two forms of which the first one indicated at
29 6 should be done on a daily or monthly regular basis. This
30 information should include the plan administrator's serial
31 number for the plan coverage for each individual person and
32 include that person's identification code together with the
33 status or class of coverage under which th person is covered
34 and th nature of the change from the previous information
35 supplied for that person. The second download relates to

-11-

1 plans del ted, new plans added and plans amended among each
2 claims administrator's clientele and represents the data as
3 to the general types of coverage of the plan including the
4 plan number, the information as to the plan sponsors and any
5 changes of any form to the existing plans or added plans.
6 These downloads of data are separated and represented in the
7 drawings as reposing in two databases solely for clarity.

8 The telecommunication network 12 may be of any type for
9 transmitting data and is shown here in generalized form.
10 Providers also have communication through the network 12 and
11 may include such sources as hospitals 8, physicians 9,
12 laboratories 10 and pharmacies 11 by way of example only, and
13 these providers are the ones who are seeking payment from the
14 payors whose information has been entered through the plan
15 administrators 5.

16 The processor indicated at 13 is shown as being only a
17 single processor but may in fact use distributed processing
18 as an alternative. The processor 13 serves to link the
19 systems together from the telecommunications network 12 to the
20 databases 14 and 15 which store the information received
21 through the downloads indicated at 6 and 7. The first
22 database, Database 1 indicated at 14, contains a Grand Census
23 File which is a complete statement for each individual as
24 identified by Social Security Number or Personal
25 Identification Number and the plan numbers under each such
26 person as coverage for insurable claims and is preferably
27 updated on a daily basis for any changes to the source of
28 coverage or the list of covered persons. It is this central
29 data base which utilizes the coordination of benefits rules,
30 and without such a complete database, it is not possible to
31 entirely eliminate or identify dual sources of coverage or
32 payment.

33 Database 2, indicated at 15 contains the plan coverage
34 data including updates as to the changes provided through the
35 download indicated at 7 regarding plan coverage and
36 conditions. Database 2 also serves as a source of storage for

-12-

1 the coordination of benefits rules which may be updated as
2 necessary depending upon changes in the law.

3 FIGS. 2A, 2B and 2C show in continuous form, the flow
4 chart for a computer program utilizing the processor 13
5 together with the databases 1 and 2 indicated at 14 and 15 in
6 FIG. 1. The process inquiry server indicated at 19 in FIG.
7 2A may be a portion of the processor 13 of FIG. 1. 17
8 indicates all medical service providers which will query the
9 method to learn the primary carrier for services rendered and
10 these may be the hospitals, physicians, laboratories, etc. as
11 indicated at 8-11 of FIG. 1. Also tied into the server 19 are
12 all payors 18 who will be billed by the system for services
13 provided by the providers of 17 and these payors 18 may
14 include insurance companies, public health authorities and the
15 like. Thus, all information goes into the server 19 and, in
16 view of the generally universal access that may be had to
17 server 19, it is highly desirable to provide certain forms of
18 security. This security is first addressed at 20 to determine
19 if the person is allowed access to the databases and the
20 server to process the inquiry. If the inquiry is denied
21 access, this decision is placed in storage for security
22 investigation as indicated at 21 and operates to abort the
23 inquiry as shown at 22 and report the error to the inquirer
24 at 23 to see if possibly a wrong number has been entered. It
25 will be understood that other forms of security may also be
26 used including, requiring special modems to access the server
27 as well as the use of data encryption in the inquiry to
28 prevent unauthorized access, etc.

29 If the security operation clears the inquirer for the
30 query, the next step is indicated at 24 is to test the
31 patient's identification code to verify if it is in the
32 database in order to process the inquiry. As shown at 25, if
33 the answer is no, the result is stored for security
34 investigation as indicated at 26 and the inquiry is aborted
35 and the error is reported at 28 to the inquirer to see if
36 possibly a wrong number has been entered. If the number is

-13-

1 verified, then the query proceeds to database 1 as indicated
2 at 29 to compare the social security or personal
3 identification number to all plans of the database and all
4 individuals entered therein. By checking this, the first step
5 at 30 is to indicate if there is multiple coverage, that is,
6 more than one source of coverage for a given social security
7 number or personal identification number. If the answer is
8 no, the plan information is reported to the inquirer at 31 for
9 further options. This may involve reporting the invoice to
10 the primary obligor 32 and this data is further saved in the
11 database 33 to show that a claim has been made.

12 If there is multiple coverage, the plan terms are
13 retrieved from Database 1 at 34. Then, as shown at 35, a
14 determination is made as to whether the plan terms for each
15 form of coverage exists. If the answer is no, the alternative
16 is to determine primary coverage by class of coverage as
17 indicated at 36 after which the name and other essential
18 information of the primary obligor is reported to the inquirer
19 37 and the invoice for the claim is remitted at 38 to the
20 primary obligor and the query is saved in historical records
21 database as indicated at 39. If the plan terms exist, then
22 as shown at 40 the ICD 9 and CPT 4 codes (or DRG's or other
23 methods of identifying care rendered) are matched to the coded
24 benefits and coverage found in the plan terms located in
25 Database 1 while certain ICD 9 codes are reported to public
26 health authorities as shown at 41. As shown at decision box
27 42, the question then is whether the ICD 9 and CPT 4 codes
28 match more than one plan and according to that test if the
29 answer is no, that is the codes match only a single plan, then
30 the decision is made at 43 as to whether coverage is possible
31 under this plan. If no coverage is possible under the plan,
32 then a negative report on coverage finding is reported to the
33 inquirer as shown 44 and the matter saved in the historical
34 records database at 39.

35 On the other hand, if the codes match more than one plan
36 then it is necessary to go to database 2 to retrieve the

-14-

1 coordination of benefit rules, then according to these rules,
2 if coverage is possible as determined at 43 then the
3 coordination of benefit rules are applied to determine if
4 there is multiple coverage to which the coordination of
5 benefit rules are applicable as indicated at 48. If the
6 answer is no, then a report of possible double coverage is
7 made to the inquirer as shown at 49 and this information is
8 saved in the historical records database at 39. If the
9 multiple coverage is susceptible to the coordination of
10 benefit rules and an affirmative action is obtained at 48,
11 then the computer applies the coordination of benefit rules
12 to the multiple sources to determine a hierarchy of legal
13 obligation to indemnify or cover the claims as indicated at
14 51. If the application of these rules indicates only a single
15 coverage, the answer is no and the source of the coverage is
16 reported to the inquirer as indicated at 54 and the
17 information stored in the historical records database 39. If
18 the answer is yes, then the coordination of benefit rules will
19 rank the sources of coverage at 55 as primary, secondary,
20 tertiary, etc. This entire ranking will be reported to the
21 inquirer at 56 and the information stored in the historical
22 records database 39 as indicated.

23 The foregoing description covers the method according to
24 the present invention of determining primary, secondary and
25 other liabilities among the payor as based on a central
26 database of all insured persons. While it reports sources of
27 coverage and ranking of the sources, it does not, in and of
28 itself, provide for further processing of the claims, however,
29 according to the present invention, a further processing of
30 payment and coordination of benefits can be provided as shown
31 in FIG. 3.

32 The processing of payable amounts and remittances starts
33 with the finding of the primary carrier at 58 using the
34 procedures as set forth in FIG. 2. Once the primary carrier
35 is found, then it is necessary to recover the plan terms from
36 database 2 as shown at 59 as well as retrieve from historical

-15-

1 records the patient's account with the primary carrier
2 including data such as paid deductibles, paid co-insurance and
3 exhaustion of coverage limitations.

4 This information as passed on is indicated at 61 to allow
5 the computer to apply an algorithm to adjust the claim item
6 at issue in the inquiry against the plan coverages in the
7 patient's account to determine the net obligation of the plan
8 and the patient on the particular medical service being
9 queried. After the primary obligation has been calculated at
10 61, any remaining claim amount passes on at 62 to determine
11 if there is any secondary coverage using a repetition of the
12 processes in blocks 59, 60 and 61 to determine any amount
13 payable under a secondary plan. Likewise, if any amount
14 remains, it can be processed at 63 for tertiary, or any other
15 ancillary sources of payment available under the coordination
16 of benefits rules.

17 After the above has been calculated, the total amounts
18 are tabulated at 64 and the computer then reports a statement
19 of obligation to each payor 65 as well as a notice of billing
20 to the medical service provider at 66. Optionally, a check
21 or other form of remittance is prepared at 67 to the provider
22 and a notice at 68 is sent to the patient of the billing
23 amounts including any remaining amount due directly from the
24 patient. The system periodically (daily) reduces tens or
25 hundreds of thousands of transactions to a statement of net
26 liability among the participating insurance and health care
27 users thereof. Finally, all of the above transactions are
28 recorded in historical records database 69.

29 It will be understood that while the above methods have
30 been described as involving a single processor and two
31 databases, but distributed processing can be used and
32 databases can be separated in different locations although
33 communication is necessary among all databases or with or
34 through a central clearing point to allow the complete
35 collection of information to allow the coordination of
36 benefits process.

-16-

I CLAIM:

- 1 1. A method for using a computer apparatus comprising
2 a processing unit and a plurality of databases for rapidly
3 determining the primary and secondary sources of health
4 insurance coverage for any person having coverage from any
5 source, public or private, said method comprising the
6 following steps:
7 storing in a database of said computer
8 identification codes for each of said persons having health
9 insurance coverage together with plan identification numbers
10 for each such person under which such person has coverage and
11 coverage data for each plan,
12 storing in a database of said computer rules for the
13 coordination of benefits,
14 entering into said processing unit claims for
15 payment under health insurance coverage,
16 said processing unit accessing said database for
17 relevant identification codes and plan numbers and relevant
18 plan coverage data, and
19 said processing unit thereafter accessing said
20 database for the relevant coordination of benefits rules and
21 applying said rules to determine primary and secondary sources
22 of coverage.
- 1 2. The method of claim 1 including the steps of
2 periodically updating said identification codes for said
3 persons in said first database.
- 1 3. The method of claim 1 including the step of
2 periodically updating said rules for the coordination of
3 benefits in said second database.
- 1 4. The method of claim 1 including the additional step
2 of reporting primary coverage.

-17-

1 5. The method of claim 4 including the additional step
2 of reporting secondary coverage.

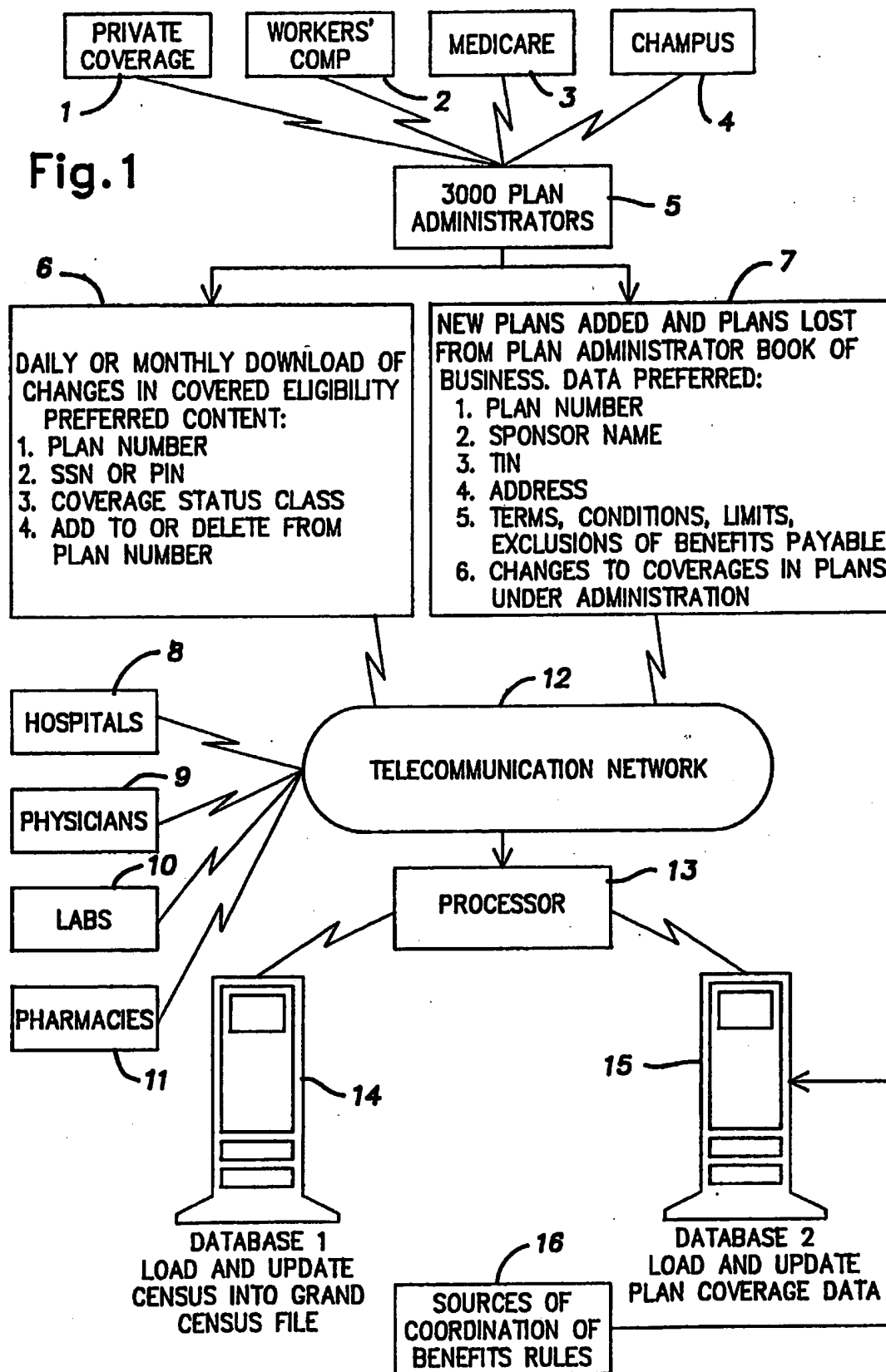
1 6. The method of claim 4 including the step of
2 processing the financial obligation for payment.

1 7. The method of claim 5 including the step of
2 processing the financial obligations of both said primary and
3 said secondary obligors for payment.

1 8. The method of claim 1 including the aggregation of
2 information on financial obligations between and among users
3 of the system.

1 9. The method of claim 1 including the step of storing
2 in the database the results of said determinations.

1/5



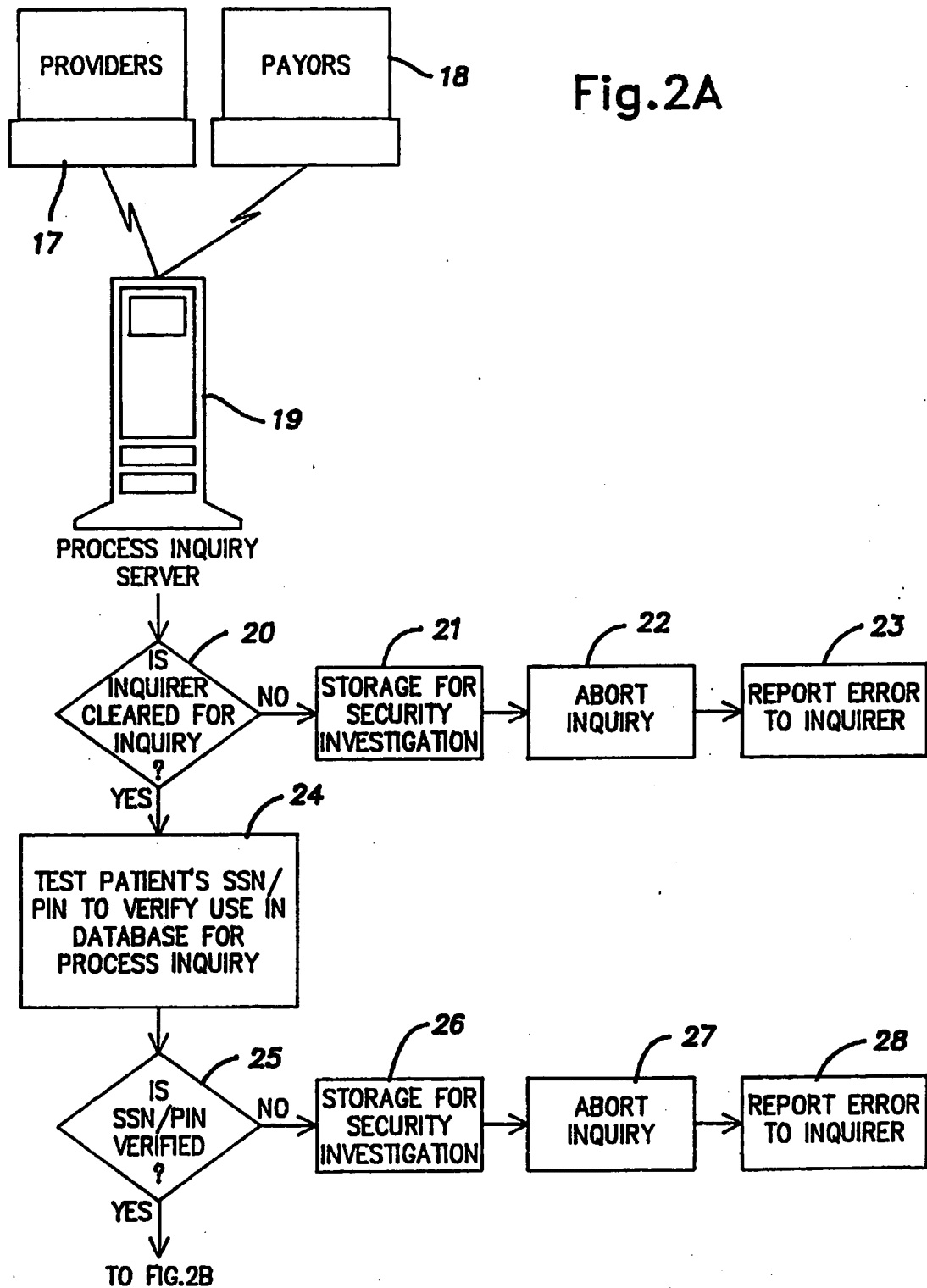


Fig.2B

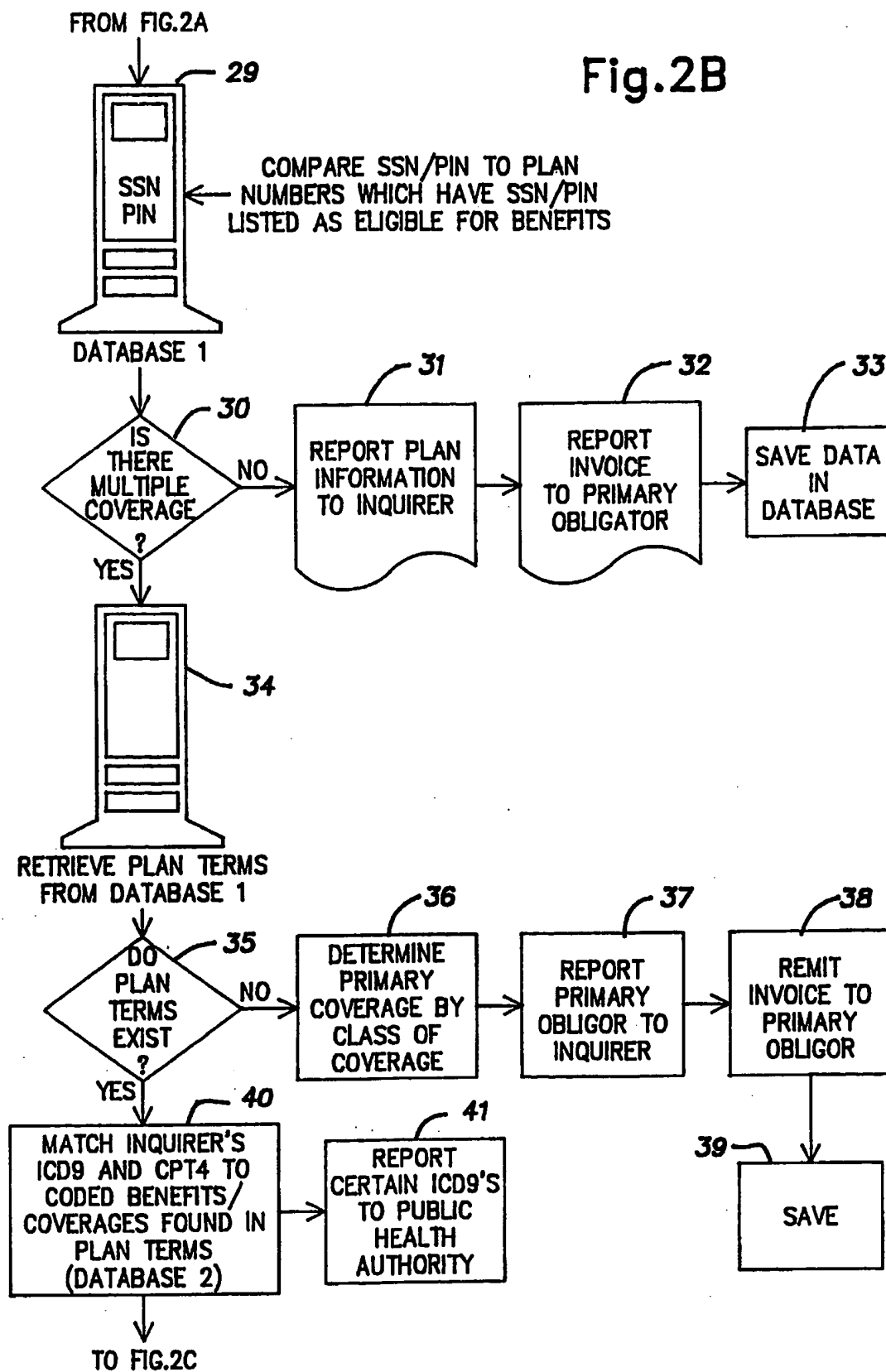
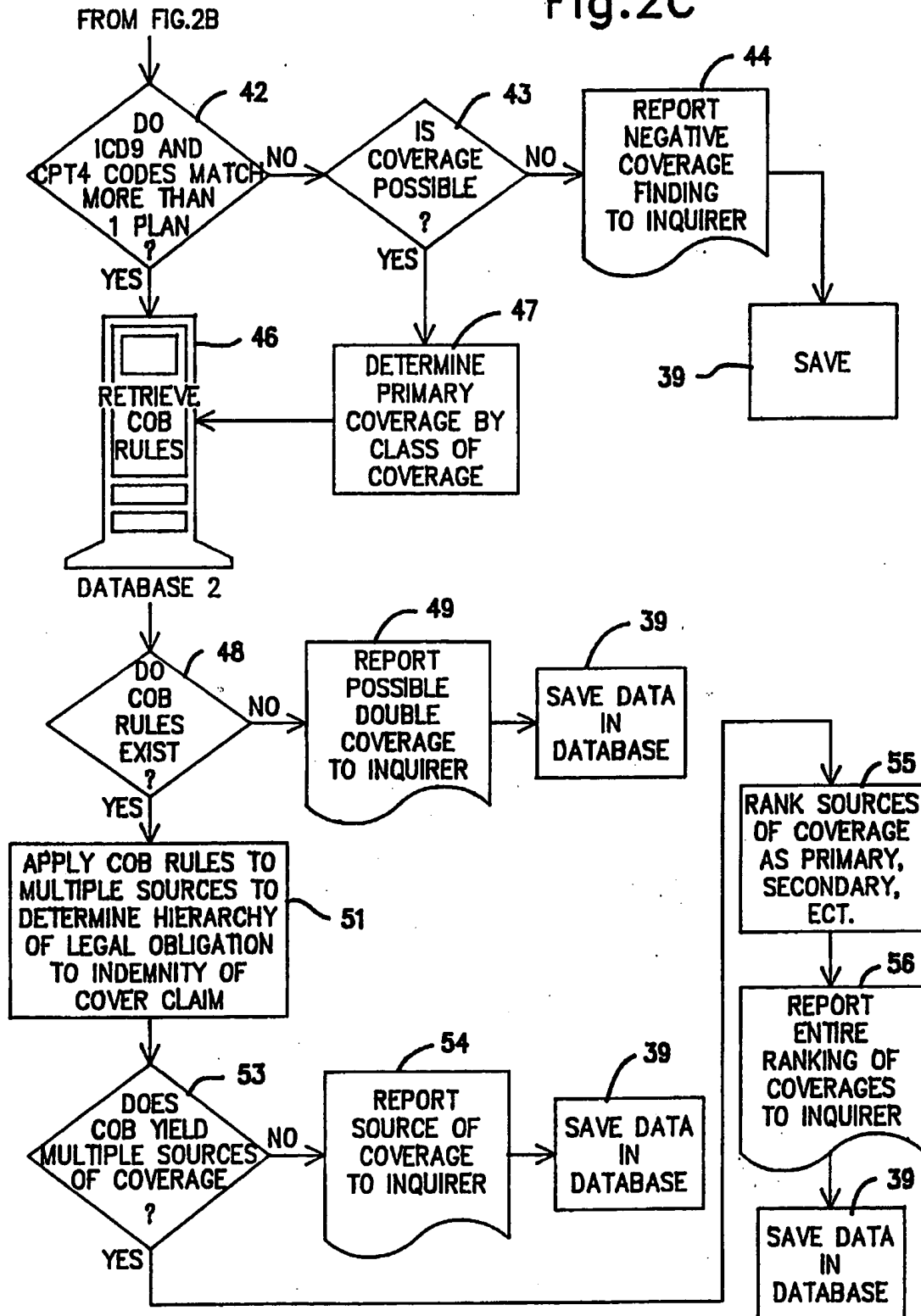


Fig.2C



5/5

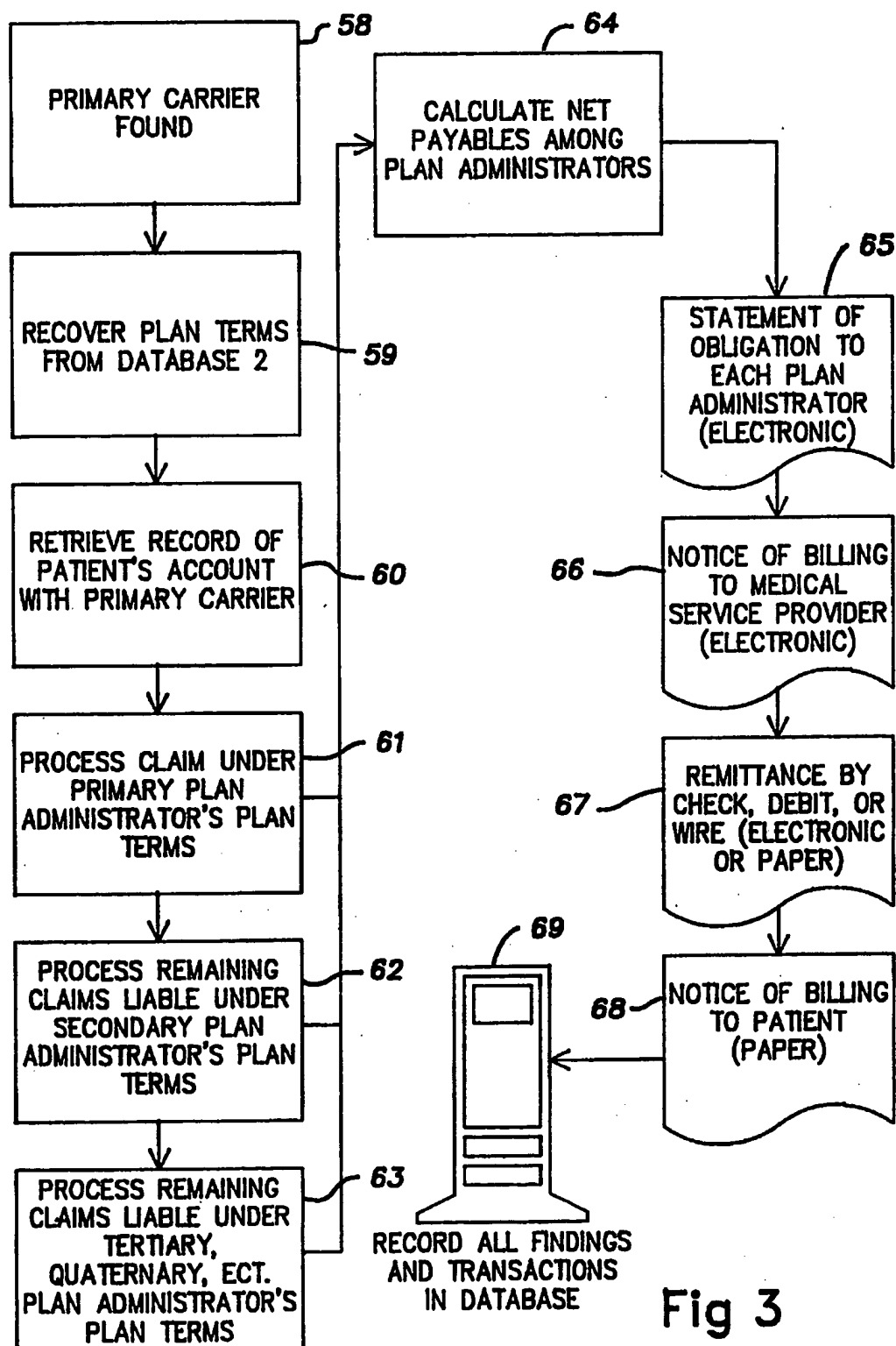


Fig 3



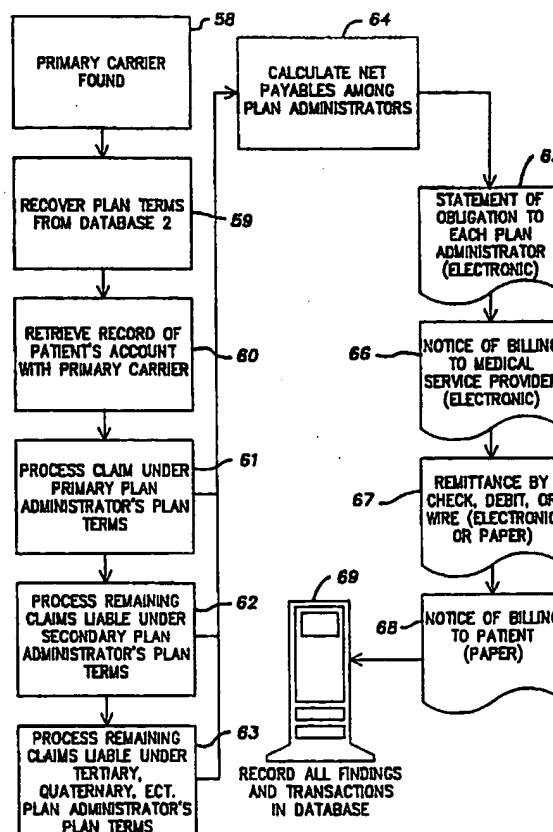
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G06F 17/60		A3	(11) International Publication Number: WO 95/03569
			(43) International Publication Date: 2 February 1995 (02.02.95)
(21) International Application Number: PCT/US94/08012		(81) Designated States: BR, BY, CZ, HU, JP, KR, PL, RU, SK, UA, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 18 July 1994 (18.07.94)			
(30) Priority Data: 08/093,092 16 July 1993 (16.07.93) US		Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(71)(72) Applicant and Inventor: LAWLOR, Patrick, M. [US/US]; 3561 Lynnfield Road, Shaker Heights, OH 44122 (US).		(88) Date of publication of the international search report: 16 March 1995 (16.03.95)	
(74) Agent: DICKINSON, R., H., Jr.; Pearne, Gordon, McCoy & Granger, 1200 Leader Building, Cleveland, OH 44114 (US).			

(54) Title: **METHOD FOR DETERMINING PRIMARY AND SECONDARY SOURCES OF HEALTH INSURANCE COVERAGE**

(57) Abstract

A method for operating a computer apparatus, located at a hospital (8), physician's office (9), a lab (10), or a pharmacy (11), for applying the rules for coordination of benefits to claims under medical insurance (51). The computer has a first database (14) containing a grand census file identifying all individuals by social security number or personal identification number together with the plans under which they are covered. A second database (15) contains information as to the nature of the plan coverage together with the rules for coordination of benefits. When a claim is processed (figs. 2a-2c), it is first checked against the individual by identification number in the first database (step 29) to determine all plans under which coverage could be obtained (figs. 2b-2c). Thereafter, the claim is processed for coverage under the information in the second database together with the rules for coordination of benefits to determine primary and secondary coverage (steps 43, 46-49, 51, 53-55). Optionally, the claims may then be processed for payment according to such primary and secondary coverage (steps 64-68). All such determinations are then stored in a historical database for future reference (step 39).



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US94/08012

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : Please See Extra Sheet.

US CL : 364/406, 413.01

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 364/406, 413.01, 401, 408; 235/379

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, DIALOG

search terms: medical insurance, health insurance, primary or secondary coverage, database, coverage or benefits, processing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US, A, 4,916,611 (Doyle, Jr. et al.) 10 April 1990, cols. 2-10.	1-9
Y	Government Affairs Perspectives, Metropolitan Life and Affiliated Companies, No. 91-2, issued 30 July 1991, J. B. Helitzer, "THE A-B-C OF COB: Almost Everything You Need To Know About How and Why It Works," pp. 1-30.	1-9
Y,P	US, A, 5,235,507 (Sackler et al.) 10 August 1993, cols. 1-4.	1-9
A	US, A, 5,070,452 (Doyle, Jr. et al.) 03 December 1991, see Abstract.	1-9
A	US, A, 4,858,121 (Barber et al.) 15 August 1989, see Abstract.	1-9

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	* T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
* A document defining the general state of the art which is not considered to be part of particular relevance	* X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
* E earlier document published on or after the international filing date	* Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
* L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	* & document member of the same patent family
* O document referring to an oral disclosure, use, exhibition or other means	
* P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

23 AUGUST 1994

Date of mailing of the international search report

31 JAN 1995

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

GAIL O. HAYES

Telephone No. (703) 305-3800

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US94/08012

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US, A, 5,235,702 (Miller) 10 August 1993, see Abstract.	1-9
Y,P	US, A, 5,235,654 (Anderson et al.) 10 August 1993, see Abstract.	1-9
O	DIALOG Product Description: Delta Patient Management & Billing System, Delta Medical Shareware, Inc., released 1990.	1-9
A	US, A, 4,491,725 (Pritchard) 01 January 1985, see Abstract.	1-9
A	US, A, 5,025,138 (Cuervo) 18 June 1991, see Abstract.	1-9
A	US, A, 4,885,686 (Vanderbei) 05 December 1989, see Abstract.	1-9
A	US, A, 4,648,037 (Valentino) 03 March 1987, see Abstract.	1-9
A	US, A, 4,633,397 (Macco) 30 December 1986, see Abstract.	1-9
A	US, A, 4,774,664 (Campbell et al.) 27 September 1988, see Abstract.	1-9

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US94/08012

A. CLASSIFICATION OF SUBJECT MATTER:

IPC (6):

G06F 17/60